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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/803,965 | 03/19/2004 | Jun Koyama | 07977-209004 | 6486 |
| 26171 | 7590 | 04/04/2005 | EXAMINER | |
| FISH & RICHARDSON P.C. 1425 K STREET, N.W. 11TH FLOOR WASHINGTON, DC 20005-3500 | | | ROSE, KIESHA L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2822 | |

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,965

Applicant(s)

KOYAMA ET AL.

Examiner

Kiesha L. Rose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-27 is/are allowed.
- 6) ☒ Claim(s) 10-15 and 28-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/04, 1/05, 2/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed 10 December 2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Keizo (JP 5053127).

Keizo discloses a liquid crystal display (Fig. 4b) that contains a first wiring line (2) over a substrate (1), a second wiring line (4) over the first wiring line with an insulating film interposed therebetween, wherein the first and second wiring line extend in parallel with each other, wherein the width of the first wiring line is smaller than a width of the second wiring line and the first and second wiring lines are arranged such that the second wiring line extends beyond opposite edges of the first wiring line and the first wiring line and second wiring line are electrically connected with each other via a plurality of contact holes opened in the insulating film.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keizo in view of Takemura et al. (U.S. Patent 5,739,549).

Keizo discloses all the limitations except for the materials of the insulating film and the first and second wiring comprising aluminum. Whereas Takemura discloses a thin film transistor (Fig. 2a-2f) that contains a first wiring line (205/206), second wiring (220/222) with an insulating film (interlayer insulating film) (218) therebetween, where the insulating film can comprise polyimide or silicon nitride and the first and second wiring lines comprised of aluminum. The first and second wiring lines are formed of aluminum because of their high voltage withstand characteristics to prevent the wiring from shorting with other wires. (Column 5, lines 4-8) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Keizo by incorporating insulating film of polyimide or silicon nitride and to have the first and second wiring lines formed of aluminum for their high voltage withstand characteristics to prevent the wiring from shorting with other wires as taught by Takemura.

Claims 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keizo in view of Shigetoshi (JP 5241200).

Keizo discloses a liquid crystal display (Fig. 4b) that contains a first wiring line (2) over a substrate (1), a second wiring line (4) over the first wiring line with an insulating film interposed therebetween, wherein the first and second wiring line extend in parallel with each other, wherein the width of the first wiring line is smaller than a width of the second wiring line and the first and second wiring lines are arranged such that the second wiring line extends beyond opposite edges of the first wiring line and the first wiring line and second wiring line are electrically connected with each other via a plurality of contact holes opened in the insulating film. Keizo disclose all the limitations except for the first wiring line formed on the same layer as the gate electrode and the second wiring line formed on the same layer as the source and drain electrode.

Whereas Shigetoshi discloses a liquid crystal display (Fig. 3) that contains a substrate (31), a first wiring line (36), a gate electrode formed on the same layer as the first wiring line, a second wiring line (38) formed over the first wiring line in parallel and is electrically connected to the first wiring line via a plurality of contact holes, source and drain electrodes formed on the same layer as the second wiring line and an insulating film (39) formed between the first and second wiring line. The gate electrode is formed on the same layer as the first wiring line and the source and drain electrodes are formed on the same layer as the second wiring line to lower manufacturing cost and for better time efficiency. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Keizo by incorporating the gate electrode formed on the same layer as the first wiring line and the source and

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drain electrodes formed on the same layer as the second wiring line to lower manufacturing cost and for better time efficiency as taught by Shigetoshi.

Claims 29-33 and 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keizo and Shigetoshi in view of Takemura et al.

Keizo and Shigetoshi disclose all the limitations except for the materials of the insulating film and the first and second wiring comprising aluminum. Whereas Takemura discloses a thin film transistor (Fig. 2a-2f) that contains a first wiring line (205/206), second wiring (220/222) with an insulating film (interlayer insulating film) (218) therebetween, where the insulating film can comprise polyimide or silicon nitride and the first and second wiring lines comprised of aluminum. The first and second wiring lines are formed of aluminum because of their high voltage withstand characteristics to prevent the wiring from shorting with other wires. (Column 5, lines 4-8) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal devices of Keizo and Shigetoshi by incorporating insulating film of polyimide or silicon nitride and to have the first and second wiring lines formed of aluminum for their high voltage withstand characteristics to prevent the wiring from shorting with other wires as taught by Takemura.

Allowable Subject Matter

Claims 16-27 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 16-27 are allowable because prior art does not show alone or in combination along with the

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limitations of the independent claims such as, the first wiring line having a first portion and second portion where the first portion of the first wiring line and second wiring line are electrically connected to each other via a plurality of contact holes opening in the insulating film and the second portion of the first wiring line and second wiring line are electrically connected to each other via a plurality of contact holes in the opening of the insulating film.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 10-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiesha L. Rose whose telephone number is 571-272-1844. The examiner can normally be reached on M-F 8:30-6:00 off 2nd Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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